

Package with a tray and method**JAP15 Rec'd PCT/PTO 04 JAN 2006**

The present invention relates to a package with a tray and a method.

Packages of this kind are generally known in the prior art. There are numerous types of such packages. For example, there are packages, especially for pieces of salmon or cheese, with a bottom sheet of a packaging film, with a top sheet of a packaging film and with an intermediate preferably impermeably coated cardboard substrate flap carrying the pieces of salmon. However, such packages have the disadvantage, that it is difficult to reinsert the tray with the residual goods once it has been removed entirely. This problem has been overcome in the prior art by making the wrapping much larger than the tray, which is not material efficient and not attractive.

The object of the present invention is to obviate said drawback and to provide a package and a method which allows a user of the package and of the packaged goods to partially use the packaged goods in a very easy way and still to be able to re-pack the goods in a secure and easy way.

This is achieved with a package and the method according to the independent claims. Preferred embodiments of the package and the method are claimed in the independent claims.

One advantage of the present invention is, that it is extremely easy for a consumer to remove and reinsert goods from and into the package. The package according to the present invention is easily produced.

The package according to the invention is preferably made from transparent, partially transparent, partially opaque and/or coloured plastic films. These films are preferably multilayer films with at least one sealing layer and/or one barrier layer. The sealing layer allows to seal parts of film together for example by applying heat and/or pressure. Thus, the film can be shaped into the desired form and then sealed. The barrier layer reduces the migration of gaseous substances through the film, for example oxygen into the package and/or water vapour from the package. The plastic

film according to the invention can be provided as a wrapping and can be produced on flow-wrappers, especially horizontal flow-wrappers.

The package comprises, additionally to the wrapping, a tray, which carries preferably goods, especially slices of food, e.g. slices of cheese, ham etc. The tray facilitates the removal and insertion of the goods into the package. The tray functions also as a mechanical stabiliser of the package so that the package maintains its shape, which improves the esthetical aspects of the package.

According to the present invention, the package and/or the tray comprise means to limit the removal of the tray from the package. Preferably these means are provided such, that the tray can only be removed less than 95%, more preferably less than 90% and even more preferably less than 80%. Preferably, the means which are located at the tray are dents.

Preferably, the goods are removed from the package together with the tray. Consequently, in a preferred embodiment of the present invention, the goods are only partially removed as well.

Preferably, the inventive package comprises means to reclose it once it has been initially opened. These means can be for example an adhesive, which is preferably attached to the outside of the wrapping and which allows to attach a part of the opening area, for example a flap to the wrapping. The adhesive can be initially covered with a tape. The person skilled in the art understands that the package can be opened and closed as often as desired.

In a preferred embodiment of the present invention, the package comprises a scoring that is located between the residual bag and the opening means. The scoring can be produced for example with a laser or a punch. Preferably, the scoring does not extend through the barrier-layer, so that the penetration of gases through the film is reduced even though the film is scored. Even more preferred, the scoring does not harm the sealing layer.

The invention will be explained in more detail below with reference to the appended drawings 1 -5, in which:

Figure 1 shows a first embodiment of an opened package according to the present invention;

Figure 2 shows a first embodiment of a closed package according to the present invention;

Figure 3 shows a second embodiment of an opened package according to the present invention and

Figure 4 shows a second embodiment of a closed package according to the present invention.

Figure 5 shows a detailed cross-sectional view of the opening feature of the second embodiment of the package.

In **figure 1**, a first embodiment of a package 1 according to the invention is schematically shown, where the package 1 comprises a plastic film as a wrapping 10 with at least one seam 2. The film or wrapping 10 encloses a tray 3 on which packaged goods 4 is positioned. In figure 1, the package 1 is shown in an opened state, whereas the tray 3 is removed as far as possible, i.e. it is shown in its pull-out position.

In **figure 2**, the first embodiment of the package 1 is shown schematically in its closed position, where the tray 3 is completely moved inside the package 1. The package is also depicted prior to the first-time opening.

In this embodiment, the package 1 comprises originally a first special seam portion 6 which is used to open the package 1 initially; i.e which functions as an opening means. Additionally, seam portion 6 closes the package hermetically prior to the first opening; i.e. if the first special seam portion 6 is not removed, the package 1 remains completely closed and the goods 4, especially slices of cheese or ham or the like,

can be stored during a relatively long period, because the packaging film prevents a contact of substances of the interior of the package with substances at the exterior of the package. When the first special seam portion 6 is opened and thereby removed, the package 1 of the first embodiment is not reclosable. In order to remove portion 6, a weakened opening feature, e.g. a laser or a mechanical scoring, at the side of the first special seam portion 6 neighbouring the package 1 is provided, in order to easily remove the first special seam portion 6. In the first embodiment, a re-closure feature for the package is not provided.

In **figure 3**, a second embodiment of the package 1 is shown schematically in its open position and in **figure 4**, the second embodiment of the package 1 is shown in its closed position. In **figure 5**, a detailed cross-sectional view of the opening feature of the second embodiment of the package 1 is shown. Identical to the first embodiment of the package 1, a tray 3 carrying goods 4 in a wrapping 10 made of plastic film, is provided. The second embodiment of the package 1 comprises a seam portion 2a near the opening 51 of the package 1. The wrapping 10 comprises an upper film 11 and a lower film 12. The opening 51 of the second embodiment of the package 1 is re-closable. Thus, there is provided in the upper film 11 a weakening feature 52, for example laser cut 52 or a mechanical die-cut 52, each preferably with a U-shaped cross section. The scoring or the cut 52 is preferably incomplete, so that initially the package 1 is completely closed and the barrier-layer is not harmed. The entire scoring is preferably U-shaped. In the area of the cut 52 there is a re-closure label 53 covering at least partially the cut 52. In the embodiment shown in Figures 3 and 4, the re-closure label 53 covers the cut 52 completely. The re-closure label 53 is provided with an adhesive in order to be able to attach the label 53 to the package 1 after the initial opening. The package is initially opened by pulling the label 53 backwards which breaks the weakened upper film 11 along the cut 52. Therefore, the cut 52 functions together with the label 53 as an opening means. The open-position of the label 53 is depicted with a dotted line in figure 5.

In both of the embodiments of the present invention, there are provided means to prevent the tray 3 together with the goods 4 from being completely pulled-out of the package 1, i.e. pulled-out completely out of the wrapping 10. In order to achieve this, there is, according to the first embodiment, a second special seam portion 5 near the

opening of the opened package 1 provided. The person skilled in the art understands, that the seam portion 5 has the main function to reduce the cross-section of the opening. The second special seam portion 5 interacts with special end portions 31, for example dents, of the tray 3 to prevent a complete pulling-out of the tray 3 from the package 1. In the second embodiment, the means to prevent the tray 3 of being completely pulled-out of the package 1 are provided in the form of the cut 52 which extends only over a part of the width of the package 1, thus, providing an opening 51 of the package 1 extending only over a part of the width of the package 1.

Preferably, the special end portions 31 of the tray 3 are provided as regions of the tray 3 having a superior broadness than other parts 32 of the tray 3. On the one hand, the second special seam portions 5 of the package 1 (or the cut 52) are provided so as to allow and preferably guide the other parts 32 of the tray 3 to slide inside and outside the package 1, carrying the goods 4 with them. On the other hand, the second special seam portions 5 of the package 1 (or the cut 52) are provided as to prevent a passing of the special end portions 31 of the tray 3 beyond seam portion 5. By the interaction of these means, the tray 3 is prevented from being completely unbaged. The second embodiment according to figures 3 and 4 work accordingly. Therefore, the tray 3 can only partially be unbaged, i.e. up to a predetermined maximum extent of, e.g. 80% or 90% or 95%, depending especially to the mechanical strength of the special end portions 31 of the tray 3 and a usual force applied by the user of the package 1 to pull out the tray 3 from the package 1. The maximum extent is according to the invention in any case below 100%. It is possible according to the invention, that the maximum extent to which the tray 3 can be unbaged is either provided such that the (slices of) goods 4 carried by the tray 3 are completely unbaged or such that the goods 4 are only partially pulled out. In the latter case, the tray 3 can be more easily inserted into the package 1.

The form of the package 1 is depicted in the figures as being rectangular. However, this is a mere example of possible forms of the package 1, which can be provided – especially adapted to the form of the (slices of) goods 4 – as well as being round, oval or the like.